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**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF VIRGINIA
LYNCHBURG DIVISION**

CROWN PACKAGING TECHNOLOGY,
INC.; CARNAUDMETALBOX
ENGINEERING LTD.

Plaintiffs,

v.

BELVAC PRODUCTION MACHINERY,
INC.,

Defendant.

CASE No. 6:18-cv-70

MEMORANDUM OPINION

JUDGE NORMAN K. MOON

I. Introduction

After several years of pre-trial practice, this patent case proceeded to trial in late June 2022. The trial lasted two weeks. Both parties moved for judgment as a matter of law at the conclusion of the opposing party's case, and this Court denied both parties' motions, holding that the jury had a legally sufficient basis to find for the non-movant on each of the issues presented. The jury returned a verdict finding that Plaintiff (Crown/CMB) did not prove by a preponderance of the evidence that Defendant (Belvac) infringed any of the Asserted Claims (willfully or not) and that Defendant did not prove by clear and convincing evidence that any of the Asserted Claims were invalid. (Dkt. 324). The Court entered judgment on the jury's verdict. (Dkt. 321 (Trial Day 9 Transcript) at 4:25–5:2).

This matter now comes before the Court on the parties' post-trial renewed motions for judgment as a matter of law and motions for new trial. (Dkt. 336 (Plaintiff's motion); Dkt. 338 (Defendant's motion)). The Court holds that the jury had a legally sufficient evidentiary basis for each of its findings challenged by these motions, and that the jury verdict was not against the

weight of the evidence or based on false evidence, nor would it result in miscarriage of justice.

Therefore, the Court will deny both motions in full.

II. Legal Standard

A. Rule 50(b) Renewed Motion for Judgment as a Matter of Law

Federal Rule of Civil Procedure 50(b) provides that a party may make a renewed motion for judgment as a matter of law no later than 28 days after the entry of judgment. “It is well-established that a ‘Rule 50(b) motion should be granted if a district court determines, without weighing the evidence or considering the credibility of the witnesses, that substantial evidence does not support the jury’s findings.’” *Bennett v. R & L Carriers Shared Servs., LLC*, 744 F. Supp. 2d 494, 509 (E.D. Va. 2010) (quoting *Konkel v. Bob Evans Farms, Inc.*, 165 F.3d 275, 279 (4th Cir. 1999)). “A mere scintilla of evidence is insufficient to sustain the verdict, and the inferences a jury draws to establish causation must be reasonably probable.” *Lust v. Clark Equip. Co.*, 792 F.2d 436, 437 (4th Cir. 1986). “To determine whether to grant a motion for judgment as a matter of law, the Court must examine the evidence in the light most favorable to the non-moving party and determine whether a reasonable trier of fact could draw only one conclusion from the evidence.” *Fellowes, Inc. v. Michilin Prosperity Co., Ltd.*, 491 F. Supp. 2d 571, 577 (E.D. Va. 2007) (quoting *Brown v. CSX Transp., Inc.*, 18 F.3d 245, 248 (4th Cir. 1994) (cleaned up)). If “no rational jury could find in favor of the [non-moving party], the judge has the authority to enter judgment in favor of the” moving party. *Belk, Inc. v. Meyer Corp.*, 679 F.3d 146, 161 (4th Cir. 2012).

B. Rule 59 Motion for New Trial

Federal Rule of Civil Procedure 59 authorizes a party to make a motion for a new trial no later than 28 days after the entry of judgment. “Unlike a motion made under Rule 50, a motion

made under Rule 59(a) permits the Court to weigh the evidence and to consider the credibility of witnesses.” *Bennett*, 744 F. Supp. 2d at 509 (citing *Cline v. Wal-Mart Stores, Inc.*, 144 F.3d 294, 301 (4th Cir. 1998)). A court should grant a new trial if: “[1] the verdict is against the clear weight of the evidence, or [2] is based upon evidence which is false, or [3] will result in a miscarriage of justice, even though there may be substantial evidence which would prevent the direction of a verdict.” *Atlas Food Sys. And Servs., Inc. v. Crane Nat. Vendors, Inc.*, 99 F.3d 587, 594 (4th Cir. 1996) (quoting *Aetna Casualty & Sur. Co. v. Yeatts*, 122 F.2d 350, 352–53 (4th Cir. 1941)).

III. Discussion

A. Plaintiff’s Motion

Plaintiff moves for judgment as a matter of law or a new trial on two issues: infringement of the ‘784 Patent and infringement of the ‘982 Patent. (Dkt. 336, 337).

i. Infringement of the ‘784 Patent

Plaintiff argues that the jury did not have a legally sufficient basis for its finding that Defendant did not infringe the ‘784 Patent. The Court previously addressed portions of this issue on summary judgment, holding that there was then sufficient evidence in the record to send the issue to the jury. (*See* Dkt. 213 at 5–7). The Court now holds that the jury had a sufficient evidentiary basis for its finding at trial.

The issue here centers on the ‘784 Patent’s claim that the first-stage die throat inner surface “defines a cylinder.” Plaintiff advances two primary arguments. First, Plaintiff argues that the jury improperly considered the tapered stage 1 dies in Defendant’s machine to find that Defendant did not infringe the “defines a cylinder” limitation because the Asserted Claims contain the word “comprising” and thus could be infringed by stages 2 through 13 of

Defendant's machine, or any subset thereof, without considering stage 1. (Dkt. 337 at 5–11).

Second, Plaintiff argues that even if the jury properly considered the stage 1 dies, that Defendant offered an improper claim construction of the “defines a cylinder” limitation. (*Id.* at 11–13).

The Court holds that the jury properly considered whether the stage 1 dies of Defendant's machine satisfy the “define[s] a cylinder” limitation. Claim 1 of the '784 Patent, on which claim 7 depends, claims in relevant part:

A horizontal beverage can necking machine for forming necked beverage can bodies suitable for forming a seam with a beverage can end, the assembly comprising:

multiple horizontal necking stages adapted for necking at least 3000 beverage can bodies per minute, each necking stage being configured to rotate about a respective axis that is substantially parallel to a surface on which the necking machine is supported

each one of the necking stages including a main turret that includes: . . . a main turret starwheel having plural pockets adapted for carrying can bodies . . . each one of the pockets having a necking die at one end thereof and a pad on an opposing end;

each necking die comprising:

a throat portion having an inner surface that defines a cylinder having a throat portion diameter[.]

(JX3 ('784 Patent) at 7:37-59). Thus, the claimed horizontal necking machine assembly must “compris[e]” multiple horizontal necking stages adapted for necking at least 3,000 cans per minute. “[E]ach one” of those multiple horizontal necking stages adapted for necking at the claimed throughput speeds must also include “a main turret starwheel having plural pockets,” with “each one of the pockets having a necking die at one end.” And each of those necking dies must in turn comprise “a throat portion having an inner surface that defines a cylinder having a throat portion diameter.”

Therefore, to infringe the Asserted Claims, Defendant's machine must include multiple

horizontal necking stages adapted for necking at least 3,000 cans per minute and those multiple horizontal necking stages must each contain necking dies that practice the “define[s] a cylinder” limitation.

Plaintiff cites numerous cases on the proposition that, under Federal Circuit law, the term “comprising” means “including the following but not excluding others.” (Dkt. 337 at 7, citing *CIAS Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir. 2007); *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 811 (Fed. Cir. 1999)). That is, of course, true, but it misses the point of Defendant’s argument at trial, which was not that its machine does not infringe because it contains additional components, but that it does not infringe because it does not contain an essential component of the Asserted Claims.

As for the specific evidence that the jury heard at trial, Defendant adduced sufficient evidence that its machine requires stage 1 and its associated necking dies to achieve speeds of at least 3,000 cans per minute. The jury heard direct evidence on this point from Mr. Gillest, who explained, *inter alia*, that “you have to be able to neck 3000 cans per minute . . . [a]nd if you don’t have a first stage that is tapered, a die that is tapered, you can’t meet that requirement,” and that that an operator of Defendant’s machine would “need stage 1 . . . in order to neck at least 3000 cans per minute.” (Dkt. 312 (July 5 Trial Transcript) at 167:24–168:17; 170:16–18; 174:21–175:10). In addition, the jury heard from Harold Marshall, a retired designer at Belvac, who testified that the reason that Defendant’s machine has a tapered throat portion is because when an un-necked can enters stage 1 of the machine, the open end has an oval shape which means that the throat portion of the stage 1 dies must have a taper “to help aid in the loading process when the die comes over the can.” (Dkt. 298 (June 30 Trial Transcript) at 120:10–14; 122:8–123:4). Mr. Marshall further testified that Defendant’s machine would not be able to neck

at least 3,000 CPM without tapered stage 1 dies. (*Id.* at 143:16–144:2).

Thus, jury had a sufficient evidentiary basis to conclude that Defendant’s machine would not achieve the claimed throughput speeds without stage 1 and its dies, and, conversely, that stages 2 through 13 of the machine, alone, are not “adapted for necking at least 3000 beverage can bodies per minute.”

The question for the jury to then decide was whether each of the multiple horizontal necking stages of Defendant’s machine that are adapted to achieve the claimed throughput speeds, necessarily including stage 1, had necking dies that meet the “define[s] a cylinder” limitation. Mr. Gillest testified that all stage 1 dies in Defendant’s machine have throat portions with an inner surface that has a two- to three-degree taper, using a diagram to demonstrate the taper to the jury. (Dkt. 312 (July 5 Trial Transcript) at 170:22–171:18). He testified that a person of ordinary skill in the art (POSITA) would understand “defines a cylinder” to require that an inner surface of the throat portion be cylindrical. (*Id.* at 171:19–174:12). He then explained that the inner surface of the throat portion in the stage 1 dies is known technically as a conical shape, which does not “define a cylinder” as the Asserted Claims require. (*Id.* at 173:19–174:2). The jury heard similar evidence from Mr. Marshall, who testified that the stage 1 dies have a “tapered throat” while the throat portion of the dies on the other stages are “cylindrical”. (Dkt. 298 (June 30 Trial Transcript) at 141:10–18; 142:17–143:13).

Therefore, the jury had a legally sufficient evidentiary basis to find that Plaintiff did not meet its burden to prove that Defendant infringed the ‘784 Patent.

ii. Infringement of the ‘982 Patent

Plaintiff next argues that the Court should hold that Defendant infringes claims 20, 22, 24, and 26 of the ‘982 Patent as a matter of law. (Dkt. 337 at 13). Plaintiff advances two

arguments. One is the same “defines a cylinder” issue as with the ‘784 patent, discussed above, and is resolved in the same way for the ‘982 patent. Second, Plaintiff argues that there was insufficient evidence to support a finding of noninfringement on the separate limitation of the ‘982 Patent requiring that the main gear of each necking stage be “mounted on the main turret shaft” (the “mounted limitation”).

On the mounted limitation issue Plaintiff first argues that Defendant offered an improper claim construction on the mounted limitation via Defendant’s technical expert, Mr. Gillest. Plaintiff argues second that the jury did not have legally sufficient evidence for its finding of noninfringement on the ‘982 Patent.

On the first issue, the Court holds that Mr. Gillest did not offer an improper claim construction. The Court notes that it an expert may elaborate on a court’s claim construction within certain boundaries. *See, e.g., Innogenetics, N.V. v. Abbott Labs*, 512 F.3d 1363, 1378 (Fed. Cir. 2008) (reversing entry of JMOL because district court erred in excluding expert’s testimony whose “failure to use the district court’s exact words does not change the substance of his testimony or render it inapplicable”); *Not Dead Yet Mfg., Inc. v. Pride Solutions, LLC*, 222 F. Supp. 3d 357, 668 (N.D. Ill. 2016) (holding expert’s application of the court’s claim construction admissible where the expert’s report was “a good-faith attempt to apply the court’s construction of the claim terms, not an attempt to offer his own construction.”). Here, Mr. Gillest merely elaborated on what he believed a POSITA would understand the term “mounted on” to mean at the time of the invention. (*See* Dkt. 312 (July 5 Trial Transcript) at 160:23–161:17). Plaintiff argues that the Court should now adopt its proposed dictionary definition of “mounted on” as a matter of law at this post-trial stage as the only permissible interpretation of “mounted on” (*see* Dkt. 337 at 15–16), but that dictionary definition has never been part of the claim construction in

this case, and Plaintiff offers no case law to support the proposition that the Court can do such *ex post facto* claim construction.

On the second issue, the sufficiency of the evidence, the Court notes that Mr. Gillest testified that in Defendant's machine, the main gear is not mounted on the main turret shaft, but is instead mounted on a gear support hub, which supports the main gear's weight and is part of the base of the machine. (Dkt. 312 (July 5 Trial Transcript) at 150:19–151:7; 162:21–163:25). The jury also heard from Mr. Marshall that in Defendant's machine, "[the gear support] hub . . . is what supports the weight of the gears." (Dkt. 298 (June 30 Trial Transcript) at 138:1–25)). The jury thus had a legally sufficient evidentiary basis to find that Defendant did not literally infringe the mounted limitation.

The jury also had a legally sufficient basis to find that Defendant did not infringe under the doctrine of equivalents. The doctrine of equivalents is a method of proving patent infringement absent literal infringement if an accused invention (or part thereof) is equivalent to the claimed invention. *See Warner-Jenkinson Co. v. Hilton David Chem. Co.*, 520 U.S. 17 (1997). Here, Mr. Gillest testified that while the Asserted Claims of the '982 Patent describe main gears mounted directly on the main turret shaft (and thus the main turret shaft bears the weight of the main gear), Defendant's machine's gears are mounted on a gear support hub, giving it a "much better gear alignment" and avoiding "shaft deflection." (Dkt. 312 (July 5 Trial Transcript) at 164:22–167:21). Mr. Gillest testified that Defendant's machine uses a different way—mounting the gears on a gear support hub—to achieve a different result—creating better gear alignment and avoiding shaft deflection—than the way and result described in the '982 Patent. *See Warner-Jenkinson Co.*, 520 U.S. at 40 (explaining that an analysis of the role played by each element of a claim in the context of the specific patent "inform[s] the inquiry as to

whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element.”).

Therefore, the jury had a legally sufficient evidentiary basis to find that Plaintiff did not meet its burden to prove that Defendant infringed the ‘982 Patent.

B. Defendant’s Motion

Defendant moves for judgment as a matter of law or a new trial on two issues: invalidity for lack of written description and invalidity for obviousness. (Dkt. 338, 339).

i. Lack of Written Description

Belvac argues that it provided “uncontroverted evidence that the Asserted Claims lack sufficient written description” at trial. (Dkt. 339 at 4).

Defendant first relitigates an issue resolved at the summary judgment stage—arguing again that Plaintiff’s specifications “contain[] no reference to or descriptions of can necking machine configured for the die to move onto the can.” (*Id.*). The Court points to its prior opinion on this point, where it held that Defendant “has not offered any authority that the Court may grant summary judgment on the written description requirement solely because [Plaintiff’s] specifications do not describe the precise process in question (a die pushing [o]nto a can).” Dkt. 213 at 34. The same is true now with respect to the present motions

The question, then, is whether the jury had a legally sufficient basis to find that Plaintiff’s patents “reasonably convey[] to those skilled in the art that the inventor[s] had possession of the claimed subject matter as of the filing date.” *Ariad Pharms, Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*). *Ariad* sets out a multi-factor test for that determination, of which the jury was informed in the jury instructions. (Dkt. 319 (July 7 Trial Transcript) at 28:9–30:13). From Mr. Walsh, the jury heard evidence on the specification of the patent, the nature

and scope of the claims, the understanding of skilled artisans, and criticality; this evidence allowed Mr. Walsh to reach the conclusion that the Asserted Claims have adequate written description. (Dkt. 314 (July 6 Trial Transcript) at 140:2–143:15). The jury heard from Mr. Dunwoody (Plaintiff’s lead inventor) and Mr. Egerton (Plaintiff’s lead engineer) about the specific components of Plaintiff’s machine (Dkt. 288 (June 28 Trial Transcript—Dunwoody Direct) at 18:5–18, 23:13–22; Dkt. 288 (June 28 Trial Transcript—Egerton Direct) at 84:20–85:9), and how Walsh understood those components to be reflected in the written description (Dkt. 314 (July 6 Trial Transcript) at 142:9–23). Further, the jury heard Mr. Walsh explain several times at trial that it had been known to those in the field that either the die or the can could be the moving component. (Dkt. 294 June 29 Trial Transcript—Walsh Direct) at 116:18–117:20; Dkt. 314 (July 6 Trial Transcript—Walsh Direct) at 142:9–23). Finally, of course, the jury had access to the Asserted Claims themselves, and their written description.

Thus, the jury had a legally sufficient evidentiary basis to find that Defendant had not met its burden to prove that the Asserted Claims were invalid for lack of written description.

ii. Obviousness

Next, Defendant argues that it is entitled to judgment as a matter of law or a new trial on its claim that the Asserted Claims are invalid as obvious. (Dkt. 339 at 8–11). At trial, Defendant presented two theories as to why the Asserted Claims were invalid as obvious: that the Asserted Claims were obvious (1) “in view of the features that the Asserted Claims that the named inventors derived from Belvac’s 595” in combination with the 795 machine (using a derivation theory) or (2) “in view of Belvac’s 795K necking machine in combination with Belvac’s 595SK machine, further (with respect to certain Asserted Claims) in combination with International Patent Publication Number WO 97.37786 (‘Bowlin’).” (*Id.* at 8–9).

The jury heard evidence that before the CMB3400 and the Asserted Patents, no one had ever devised a necker with the parameters of the Asserted Claims. (Dkt. 288 (June 28 Trial Transcript—Dunwoody Direct) at 21:17-21 (“combination that had never been achieved before”); *id.* (Egerton Direct) at 84:20-85:9; Dkt. 294 (June 29 Trial Transcript—Walsh Direct) at 22:18-21, 131:20-23, & 134:13-19; Dkt. 312 (July 6 Trial Transcript—Walsh Direct) at 119:10-17). The jury heard evidence that the reason no machine had ever combined the claimed parameters was because of a known and unresolved tradeoff between speed and stroke length: skilled artisans believed that increasing the stroke length would limit speed, and vice versa. (Dkt. 282 (June 27 Trial Transcript—Dunwoody Direct) at 192:24-196:12; Dkt. 312 (July 6 Trial Transcript—Walsh Direct) at 121:7-20). Finally, the jury heard evidence about the substantial differences between the 795 machine and the CMB3400—in specifications, performance, and sales. (Dkt. 312 (July 6 Trial Transcript—Gillest Cross) at 6:16-25; 10:15-12:1; 11:19–12:1).

Thus, the jury had a legally sufficient evidentiary basis to find that Defendant had failed to meet its burden to prove that the Asserted Claims were invalid as obvious.

IV. Conclusion

The Court finds no reason to disturb the jury’s verdict in the case. Therefore, in an accompanying order, the Court will deny both parties’ renewed motions for judgment as a matter of law and motions for new trial, Dkt. 336 and 338, in full.

The Clerk of Court is directed to send a copy of this opinion to all counsel of record.

Entered this 29th day of August 2022.


NORMAN K. MOON
SENIOR UNITED STATES DISTRICT JUDGE